

IN THE CLAIMS

Claims 1-88: Cancelled.

89. (new) A miniature rheometer for analyzing a small quantity sample, comprising:

- a first plate and a second plate, forming a pair of plates having a known geometry for confining the sample between the plates, said sample having a volume of 200 microliters or less;

- an adjusting device for adjusting the separation of the plates;

- an actuating element mechanically coupled to the first plate, which produces a shear strain within the sample by generating a defined small scale relative motion of the first and second plates;

- a sensing element which outputs a position signal indicative for a displacement of at least one of the first and second plates; and

- a feedback circuit for providing force rebalance of the force applied to the sample by the small scale relative motion of the first and second plates on the basis of the position signal,

wherein an amount of force rebalance is a measure for the shear stress within the sample.